



Memorandum

**TO: TREATMENT PLANT ADVISORY
COMMITTEE**

FROM: Kerrie Romanow

**SUBJECT: FIVE-YEAR 2022-2026 PROPOSED
CAPITAL IMPROVEMENT
PROGRAM**

DATE: May 13, 2021

This memorandum serves to transmit the San José/Santa Clara Regional Wastewater Facility Proposed Five-Year 2022-2026 Capital Improvement Program (CIP). The Proposed Five-Year CIP is provided to the Treatment Plant Advisory Committee's review and for a recommendation to the San José City Council for approval.

Included with this packet as Attachment A is a ten-year (2021-2022 through 2030-2031) forecast of CIP allocations based on the assumption that all agencies will fund their respective share of capital costs through cash contributions.

If you should have any questions, please contact Napp Fukuda at 408-793-5353.

/s/

KERRIE ROMANOW
Director, Environmental Services

ATTACHMENT A

PROPOSED
SAN JOSE / SANTA CLARA
WATER POLLUTION CONTROL PLANT

700 Los Esteros Road
San Jose, California 95134

Five-Year 2022-2026
Capital Improvement Program

Submitted by

Kerrie Romanow, Director
Environmental Services Department
City of San Jose

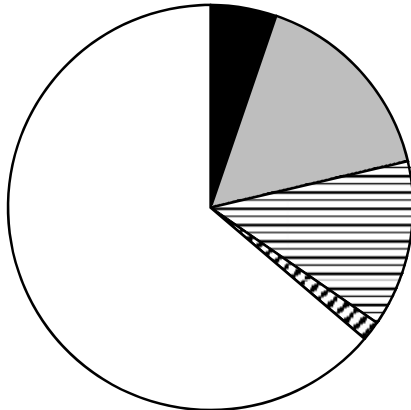
TO: Treatment Plant Advisory Committee

Sam Liccardo
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Karen Hardy
John M. Gatto
Carmen Montano
Paul Resnikoff
David Sykes
David Cohen
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(Chair) Mayor, City of San José
(Vice-Chair) Councilmember, City of Santa Clara
Vice Mayor, City of Santa Clara
Board Director, Cupertino Sanitary District
Vice Mayor, City of Milpitas
Board Director, West Valley Sanitation District
City Manager, City of San José
Councilmember, City of San José
Councilmember, City of San José

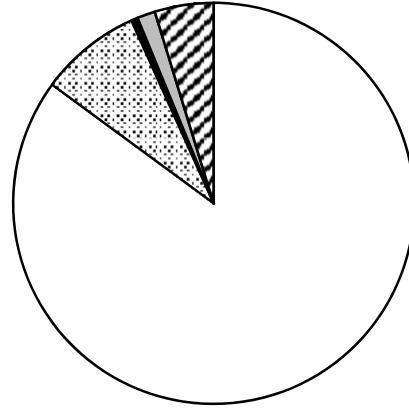
WATER POLLUTION CONTROL 2022-2026 Capital Improvement Program

**2021-2022 Proposed
Source of Funds**



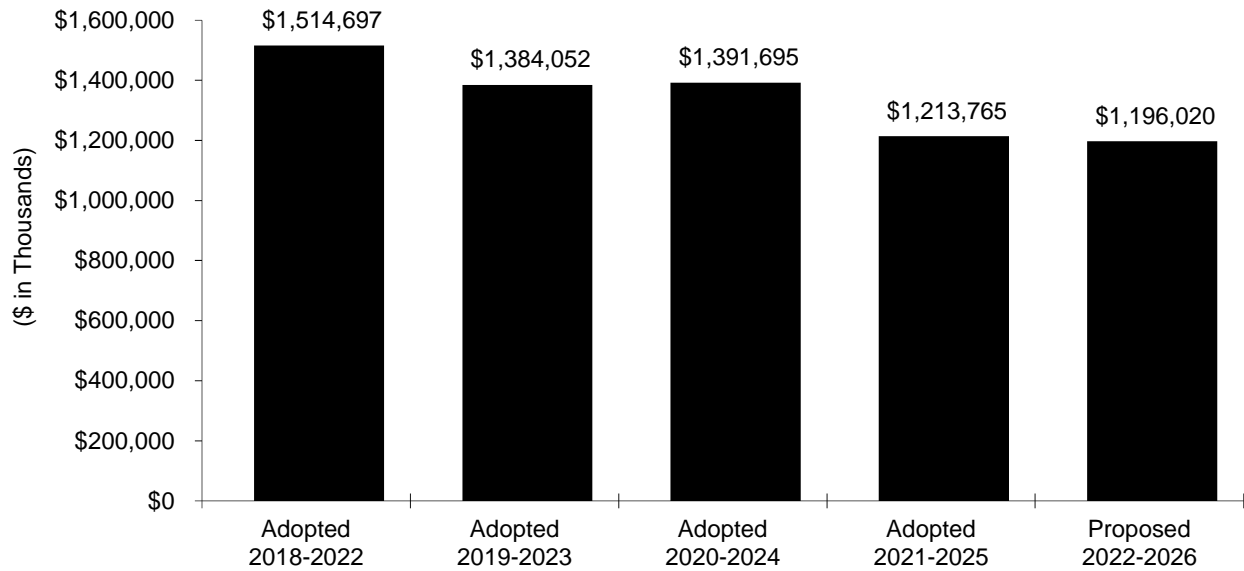
- Beginning Fund Balance
- Local Agencies
- ▨ Transfers
- ▩ Interest and Miscellaneous
- ◻ Financing Proceeds

**2021-2022 Proposed
Use of Funds**



- Construction
- ▨ Non-Construction
- Allocations and Transfers
- ▨ Reserves
- ▩ Ending Fund Balance

CIP History

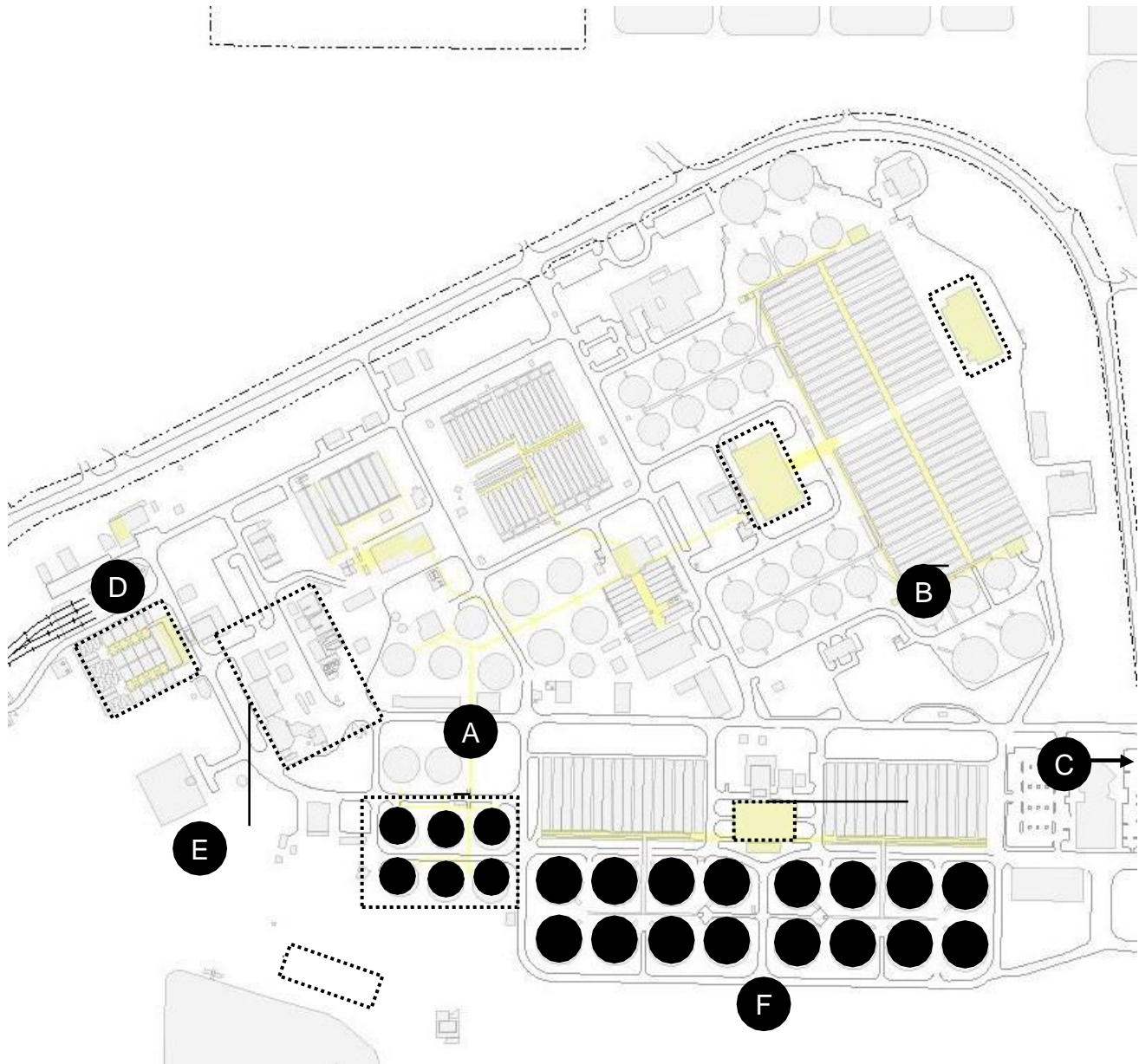


Water Pollution Control

2022-2026 Proposed Capital Improvement Program*

Major Projects

- A) Additional Digester Upgrades
- B) Aeration Tanks and Blower Rehabilitation
- C) Digested Sludge Dewatering Facility
- D) Filter Rehabilitation
- E) Headworks Improvements and New Headworks
- F) Nitrification Clarifier Rehabilitation



* Includes only the first set of projects to be in construction at the Plant. Please see the Source & Use for a full listing.

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

INTRODUCTION

The San José-Santa Clara Regional Wastewater Facility (RWF) is a regional wastewater treatment facility serving eight South Bay cities and four special districts including: San José, Santa Clara, Milpitas, Cupertino Sanitary District (Cupertino), West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation Districts 2-3 (unincorporated), and Burbank Sanitary District (unincorporated). The RWF is jointly owned by the cities of San José and Santa Clara and is administered and operated by the City of San José’s Environmental Services Department (ESD). ESD is also responsible for planning, designing, and constructing capital improvements at the RWF, including water reuse facilities. On March 26, 2013, the City Council approved to change the name of the San José-Santa Clara Water Pollution Control Plant to the RWF for use in public communications and outreach.

RWF INFRASTRUCTURE	
ACRES OF LAND	2,684
AVERAGE DRY WEATHER INFLUENT CAPACITY (MILLIONS OF GALLONS PER DAY)	167
AVERAGE DRY WEATHER INFLUENT FLOW (MILLIONS OF GALLONS PER DAY)	109
DRY METRIC TONS OF BIOSOLIDS HAULED EACH YEAR	39,500
AVERAGE MEGAWATTS PRODUCED	5.6

The 2022-2026 Proposed Capital Improvement Program (CIP) provides funding of \$1.2 billion, of which \$250.9 million is allocated in 2021-2022. The five-year CIP is developed by City staff, reviewed by the Treatment Plant Advisory Committee (TPAC), and approved by the San José City Council. The budgeted costs are allocated to each agency based on its contracted-for capacity in the RWF. Each agency is responsible for its allocated share of RWF costs, as well as the operation, maintenance, and capital costs of its own sewage collection system; debt service on bonds issued by the agency for sewer purposes; and any other sewer service-related costs. Each agency is also responsible for establishing and collecting its respective sewer service and use charges, connection fees, or other charges for sewer service.

This program is part of the Environmental and Utility Services City Service Area (CSA) and supports the following outcomes: *Reliable Utility Infrastructure* and *Healthy Streams, Rivers, Marsh, and Bay*.

PROGRAM PRIORITIES AND OBJECTIVES

The 2022-2026 Proposed CIP is consistent with the goals and policies outlined in the City’s Envision San José 2040 General Plan. These include maintaining adequate operational capacity for wastewater treatment to accommodate the City’s economic and population growth; adopting and implementing new technologies for wastewater to achieve greater safety, energy efficiency, and environmental benefit; and maintaining and operating the RWF in compliance with all applicable local, state, and federal regulatory requirements.

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

The development of the Proposed CIP is guided by the Plant Master Plan (PMP), a 30-year planning-level document focused on long-term rehabilitation and modernization of the RWF. On April 19, 2011, the City Council approved a preferred alternative for the Draft PMP and directed staff to proceed with a program-level environmental review of the preferred alternative. In November 2013, the City Council approved the PMP and certified the final Environmental Impact Report. In December 2013, Santa Clara's City Council took similar actions.



San José-Santa Clara Regional Wastewater Facility

The PMP recommends more than 114 capital improvement projects to be implemented over a 30-year planning period at an estimated investment level of approximately \$2 billion. The PMP assumed an implementation schedule of 2010 through 2040.

On September 24, 2013, the City Council approved a multi-year master services agreement with MWH Americas, Inc. for program management consultant services to assist with managing and implementing the RWF CIP¹. By February 2014, the consultant program management team, along with City staff, completed a project validation process that included a review and prioritization of PMP projects, along with gap projects identified through discussions with Operations and Maintenance staff. The projects included with this Proposed CIP are based on the outcome of that project validation and the completion of various programmatic studies. On October 17, 2017, the City Council approved an amendment to extend the consultant program management services through 2023 to align with the implementation of the ten-year capital program.

Program priorities for the near term include: managing long-term financing (for San José only); continuing to focus on program and project delivery; and actively managing project risks and variables to inform timing and amount of major encumbrances.

Program Funding: In early 2014, staff began working with representatives from the City of Santa Clara and the tributary agencies to develop a ten-year funding strategy for the CIP. On May 14, 2015, TPAC recommended approval of, and on June 2, 2015, the City Council approved the Ten-Year Funding Strategy. An update on the Ten-Year Funding Strategy was recommended for approval by TPAC on December 10, 2015 and approved by the City Council on January 12, 2016.

¹ Effective January 1, 2017, MWH Americas, Inc. was acquired and merged with Stantec Consulting Services, Inc.

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

In August 2017, staff provided an update on Clean Water State Revolving Fund (SRF) funding to the City Council, which included news that the State Water Resources Control Board (SWRCB) would not be funding the Digester and Cogeneration projects. Staff continues to monitor the issue and evaluate further SRF opportunities as appropriate. However, based on the City's experience with this program, unless significant changes are made to the funding level, program priorities, program resources, and loan agreement terms, SRF loans do not appear to be a potential source of funding for the RWF CIP.

Upgraded Digester Facilities



In October 2017, the City Council approved the establishment of a \$300 million interim financing facility (Wastewater Revenue Notes) to finance San José's portion of the capital costs. In September 2020, the City Council approved a three-year extension to this financing facility. As the CIP progresses, the City will periodically pay off the interim financing facility with long-term bonds (Bond Proceeds). This strategy provides funding for the CIP at the lowest possible cost with the least amount of risk. The 2022-2026 Proposed CIP assumes the issuance of long-term bonds in 2022-2023 and the establishment of a second interim financing facility in 2023-2024. In addition, the City continues to build the operating reserves needed for issuing long-term bonds.

Program/Project Delivery and Implementation: Successful delivery of this large, multi-disciplinary CIP requires an integrated team of City staff, outside consultants, and contractors. The program is being delivered using a mix of City staff from the Environmental Services Department, the Public Works Department, the Planning, Building and Code Enforcement Department, the Finance Department, and the City Attorney's Office, as well as program management consultant staff and various other consultant firms.

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

With roughly two dozen large projects moving through the feasibility/development, design, and construction phases, the program continues to draw from the professional consultant and/or contractor community for program management, project management, subject-matter technical expertise, engineering design, and construction management services. To address the significant large-scale construction activity, City staff has implemented a construction management strategy that has been incorporated into the 2022-2026 Proposed CIP. This includes maintaining a construction management budget to provide the necessary support from Public Works Department and/or third-party construction management and controls consultants required for projects of this magnitude and complexity.

Program/Project Delivery Variables: The program team continues to develop and refine project schedules and budgets and implement regular reporting and centralized document management systems for consistent and efficient program and project delivery. The program team continues to work on developing standardized project delivery tools, design standards and specifications, control system and integration strategies, startup, commissioning, and training.

New Cogeneration Engine Building



Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

On the project delivery front, it is important to recognize that several projects in the Proposed CIP are in the feasibility/development or design phases. Staff will continue to develop and refine project scope, schedules, and budgets as the projects progress through scoping, preliminary engineering, detailed design, and bid award. To the extent possible, staff will continue to monitor and implement mitigation measures to minimize impacts to project delivery schedule and cost caused by various factors such as changes in project delivery staffing resources, long lead time items, external permit reviews and approvals, and construction bidding climate.

CIP projects, particularly those in construction, continue to be impacted by the novel coronavirus (COVID-19). At the RWF, CIP staff have been working with contractors to continue construction safely. While many projects have experienced specific and quantifiable effects due to the pandemic, the full impact of COVID-19 on project budgets and schedules is not fully known at this time. Staff are continuing to work diligently with internal stakeholders and external contractors on a project-by-project basis to understand the impacts of the pandemic, and to mitigate its effects in order to ensure efficient project delivery at the RWF.

SOURCES OF FUNDING

Revenues for the 2022-2026 Proposed CIP are derived from several sources: transfers from the Sewer Service and Use Charge (SSUC) Fund, contributions from the City of Santa Clara and other tributary agencies, interest earnings, Calpine Metcalf Energy Center Facilities repayments, and debt-financing proceeds. Occasional transfers from the Sewage Treatment Plant Connection Fee Fund are programmed as needed per the receipt of connection fee revenue in that fund.

The SSUC Fund derives its revenues from fees imposed on San José users of the residential, commercial, and industrial sanitary sewer system. Transfers from this fund to the RWF CIP over the five years total \$243.5 million, which represents a \$15.9 million (7%) increase as compared to the 2021-2025 Adopted CIP.

Contributions from the City of Santa Clara and other agencies are determined according to agreements with the participating agencies, the amount and characteristics of flows from each agency's connections to the RWF, and the adopted budget for that fiscal year. In this Proposed CIP, contributions from the City of Santa Clara and other agencies total \$230.8 million, which represents a \$10.9 million (4.5%) decrease compared to the 2021-2025 Adopted CIP.

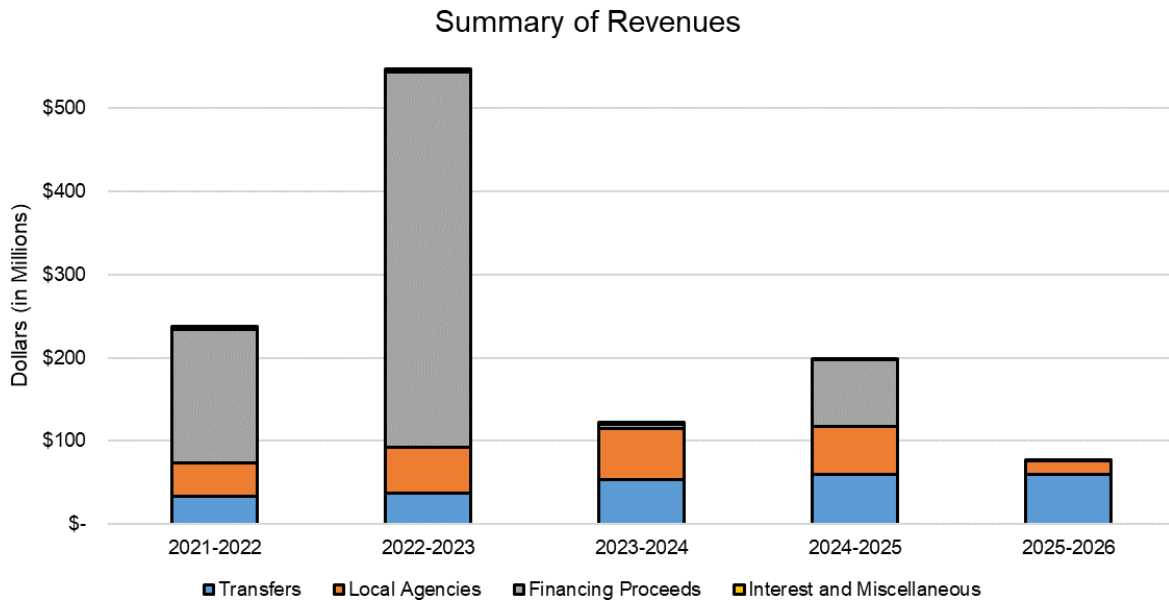
Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

SOURCES OF FUNDING

To accommodate San José’s portion of the project costs for the RWF, Financing Proceeds (Wastewater Revenue Notes and Bond Proceeds) are assumed to cover costs of the RWF improvements in the Proposed CIP. The establishment of an interim financing program, in the form of Wastewater Revenue Notes, was approved in October 2017 and renewed in September 2020 to provide up to \$300 million in interim financing capacity. The Notes provide periodic, short-term, flexible funding to meet the cash flow needs of the RWF improvement project. Generally, the notes are repaid within a three-year period and offer lower interest costs than fixed rate bonds. In 2022-2023, bonds will be issued in the amount of \$450.8 million to both repay the Wastewater Revenue Notes issued since 2017-2018 and to cover other CIP project and financing costs within that fiscal year. Associated debt service for the Wastewater Revenue Notes and debt service for the bonds is estimated to be \$3.4 million in 2021-2022, \$306.7 million in 2022-2023 (\$300.0 million for the repayment of Wastewater Revenue Notes and an additional \$6.7 million for debt service), \$23.9 million in 2023-2024, \$24.4 million in 2024-2025, and \$25.0 million in 2025-2026. The estimated size of the debt financings and the related debt service are scheduled to cover external third-party capital costs programmed in the 2022-2026 Proposed CIP while avoiding large rate increases that would be required to fund the PMP in a “pay-as-you-go” scenario. City of San José staff costs will be cash-funded and not included in either the Wastewater Revenue Notes program or long-term debt financing. Additional debt financing, in the form of notes and bonds, will likely be needed to fund project costs beyond the Proposed CIP period.



Water Pollution Control

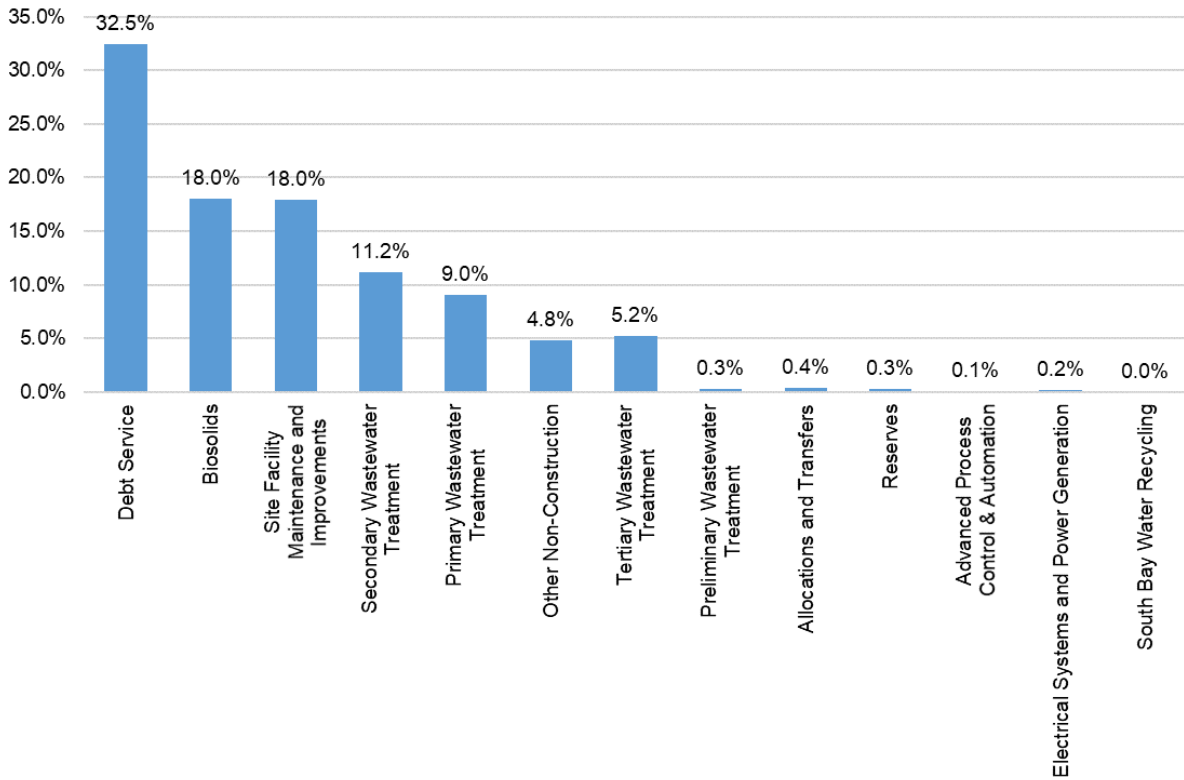
2022-2026 Proposed Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

The Water Pollution Control Capital Program’s expenditures are organized to show the use of funds in several categories. The following highlights the major projects in the program. For further information on the program’s individual projects, please refer to the Detail Pages.

**2022-2026 Water Pollution Control
Capital Program Expenditures
1,180.7 million
(excludes Ending Fund Balance)**



Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Overview

MAJOR CHANGES FROM THE 2021-2025 ADOPTED CIP

The overall size of the Water Pollution Control CIP has decreased by \$18 million from \$1,214 million in the 2021-2025 Adopted CIP to \$1,196 million in the 2022-2026 Proposed CIP. The following table outlines the most significant changes to project budgets, including new/augmented allocations and reduced/eliminated allocations.

Project Name	Incr/(Decr)
Yard Piping and Road Improvements	(\$11.8 million)
Nitrification Clarifier Rehabilitation	(\$10.6 million)
Owner Controlled Insurance Program	(\$2.3 million)
Storm Drain System Improvements	(\$1.7 million)
Outfall Channel and Instrumentation Improvements	\$1.5 million
Digested Sludge Dewatering Facility	\$13.0 million
Facility Wide Water Systems Improvements	\$38.6 million

OPERATING BUDGET IMPACT

Several projects in this Proposed CIP are expected to introduce new operating costs to the Operating Budget. These include: Digester and Thickener Facilities Upgrade, Digested Sludge Dewatering Facility, and New Headworks. The operation and maintenance impacts are due to chemical, labor, maintenance consumables (e.g. parts, oil), electrical, and hauling & tipping costs. Detail on the individual projects with operating budget impacts beginning in 2022-2023 through 2025-2026 is provided in Attachment A at the conclusion of this overview and in the project detail pages.

Net operating cost impacts will continue to be evaluated and updated based on final design and operation configurations and may result in different costs when the actual budget for the year in question is developed.

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Source of Funds (Combined)

	Estimated						
	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund (512)							
Beginning Balance	-28,442,196	9,246,807	11,654,807	89,184,807	9,245,807	9,843,807	9,246,807*
Reserve for Encumbrance	272,305,447						
Transfers and Reimbursements							
Transfer for 2009 Debt Service from the Sewer Service and Use Charge Fund (541)	5,371,000						
Transfer for Plant CIP Debt Service from Sewer Service and Use Charge Fund (541)	2,926,000	3,422,000	6,763,000	23,890,000	24,406,000	24,988,000	83,469,000
Transfer for Capital Projects from Sewer Service and Use Charge Fund (541)	30,000,000	30,000,000	30,000,000	30,000,000	35,000,000	35,000,000	160,000,000
TOTAL Transfers and Reimbursements	38,297,000	33,422,000	36,763,000	53,890,000	59,406,000	59,988,000	243,469,000
Revenue from Use of Money and Property							
Interest Income	4,438,000	3,917,000	2,764,000	1,638,000	1,175,000	953,000	10,447,000
TOTAL Revenue from Use of Money and Property	4,438,000	3,917,000	2,764,000	1,638,000	1,175,000	953,000	10,447,000
Revenue from Local Agencies							
2009 Bond Debt Repayment	155,000						
WPCP Projects and Equipment Replacement	46,554,000	39,908,000	55,801,000	61,581,000	57,587,000	15,924,000	230,801,000
TOTAL Revenue from Local Agencies	46,709,000	39,908,000	55,801,000	61,581,000	57,587,000	15,924,000	230,801,000
Other Revenue							
Calpine Metcalf Energy Center Facilities Repayment	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Source of Funds (Combined)

	Estimated 2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	5-Year Total
TOTAL Other Revenue	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000
Financing Proceeds							
Wastewater Revenue Notes	133,000,000	160,000,000		5,000,000	80,000,000		245,000,000
Bond Proceeds			450,815,000				450,815,000
TOTAL Financing Proceeds	133,000,000	160,000,000	450,815,000	5,000,000	80,000,000		695,815,000
Total San José-Santa Clara Treatment Plant Capital Fund (512)	466,696,251	246,882,807	558,186,807	211,682,807	207,802,807	87,097,807	1,191,723,807*
South Bay Water Recycling Capital Fund (571)							
Beginning Balance	3,914,443	3,956,443	233,443	276,443	319,443	362,443	3,956,443*
Revenue from Use of Money and Property							
Interest Income	67,000	68,000	68,000	68,000	68,000	68,000	340,000
TOTAL Revenue from Use of Money and Property	67,000	68,000	68,000	68,000	68,000	68,000	340,000
Total South Bay Water Recycling Capital Fund (571)	3,981,443	4,024,443	301,443	344,443	387,443	430,443	4,296,443*
TOTAL SOURCES	470,677,694	250,907,250	558,488,250	212,027,250	208,190,250	87,528,250	1,196,020,250*

* The 2022-2023 through 2025-2026 Beginning Balances are excluded from the Five-Year Total Source of Funds to avoid multiple counting of the same funds.

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Use of Funds (Combined)

	Estimated 2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	5-Year Total
<u>Water Pollution Control</u>							
Headworks Improvements	15,475,185	186,000	196,000				382,000
New Headworks	128,727,775	1,399,000	1,524,000				2,923,000
Preliminary Wastewater Treatment	144,202,959	1,585,000	1,720,000				3,305,000
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	1,000,000		10,885,000	94,530,000	686,000	684,000	106,785,000
Primary Wastewater Treatment	1,000,000		10,885,000	94,530,000	686,000	684,000	106,785,000
Aeration Basin Future Modifications					846,000	3,834,000	4,680,000
Aeration Tanks and Blower Rehabilitation	25,847,152	3,838,000	8,353,000	707,000	58,419,000	1,065,000	72,382,000
Nitrification Clarifier Rehabilitation	50,804,040	2,738,000	22,935,000	1,183,000	1,217,000	790,000	28,863,000
Secondary Clarifier Rehabilitation				565,000	2,833,000	22,379,000	25,777,000
Secondary Wastewater Treatment	76,651,191	6,576,000	31,288,000	2,455,000	63,315,000	28,068,000	131,702,000
Filter Rehabilitation	49,105,780	1,506,000	1,549,000	1,806,000			4,861,000
Final Effluent Pump Station & Stormwater Channel Improvements	2,336,710		4,713,000	997,000	35,648,000	1,645,000	43,003,000
New Disinfection Facilities					952,000	6,179,000	7,131,000
Outfall Channel and Instrumentation Improvements	1,983,140	6,114,000	592,000				6,706,000
Tertiary Wastewater Treatment	53,425,630	7,620,000	6,854,000	2,803,000	36,600,000	7,824,000	61,701,000
Additional Digester Upgrades		1,191,000	8,031,000	1,298,000	51,576,000	1,655,000	63,751,000
Digested Sludge Dewatering Facility	23,429,842	131,146,000	2,188,000	1,356,000			134,690,000
Digester and Thickener Facilities Upgrade	32,866,257	14,033,000					14,033,000
Biosolids	56,296,099	146,370,000	10,219,000	2,654,000	51,576,000	1,655,000	212,474,000
Energy Generation Improvements	15,754,829						

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated						
	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	5-Year Total
Plant Electrical Reliability	7,628,850	1,413,000	1,085,000				2,498,000
Electrical Systems and Power Generation	23,383,679	1,413,000	1,085,000				2,498,000
Advanced Facility Control and Meter Replacement	18,304,378	476,000	328,000				804,000
Treatment Plant Distributed Control System	5,018,209						
Advanced Process Control & Automation	23,322,588	476,000	328,000				804,000
Facility Wide Water Systems Improvements	4,221,733	2,859,000	41,196,000	2,036,000	1,885,000	566,000	48,542,000
Flood Protection	1,497,141		842,000	3,007,000	246,000		4,095,000
Plant Infrastructure Improvements	1,835,749	5,500,000	1,000,000	1,000,000	1,000,000	1,000,000	9,500,000
Plantwide Security Systems Upgrade		6,740,000					6,740,000
Storm Drain System Improvements	1,218,665	9,183,000	901,000	823,000			10,907,000
Support Building Improvements	6,530,700	15,244,000	873,000	194,000	150,000	667,000	17,128,000
Tunnel Rehabilitation					2,302,000	467,000	2,769,000
Urgent and Unscheduled Treatment Plant Rehabilitation	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
Various Infrastructure Decommissioning	469,000		2,590,000	18,470,000	691,000		21,751,000
Yard Piping and Road Improvements	20,156,789	8,294,000	37,325,000	35,707,000	1,870,000		83,196,000
Site Facility Maintenance and Improvements	37,429,778	49,320,000	86,227,000	62,737,000	9,644,000	4,200,000	212,128,000
Hydraulic Capacity Engineering	25,000	125,000	25,000	25,000	25,000	25,000	225,000
South Bay Water Recycling	25,000	125,000	25,000	25,000	25,000	25,000	225,000
Legacy Lagoons Biosolids Remediation	6,894,957						
Legacy Lagoons	6,894,957						
Water Pollution Control - Construction	422,631,880	213,485,000	148,631,000	165,204,000	161,846,000	42,456,000	731,622,000
Debt Service Repayment for Plant Capital Improvement Projects	4,426,000	3,422,000	306,726,000	23,890,000	24,406,000	24,988,000	383,432,000

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated 2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	5-Year Total
Owner Controlled Insurance Program	4,839,000	3,705,000	1,399,000	1,264,000			6,368,000
Master Plan Updates	1,291,900						
Preliminary Engineering - Water Pollution Control	2,533,830	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000	6,000,000
Program Management - Water Pollution Control	15,307,000	11,386,000	10,275,000	10,014,000	9,661,000	3,392,000	44,728,000
General Non-Construction - Water Pollution Control	28,397,730	20,513,000	319,400,000	36,168,000	35,067,000	29,380,000	440,528,000
Water Pollution Control - Non Construction	28,397,730	20,513,000	319,400,000	36,168,000	35,067,000	29,380,000	440,528,000
Public Art Allocation	142,834						
Public Art Projects	142,834						
Capital Program and Public Works Department Support Service Costs	677,000	1,217,000	852,000	946,000	927,000	241,000	4,183,000
Payment for Clean Water Financing Authority Trustee	5,000						
Allocations	682,000	1,217,000	852,000	946,000	927,000	241,000	4,183,000
City Hall Debt Service Fund	94,000	138,000	144,000	144,000	144,000	144,000	714,000
Clean Water Financing Authority Debt Service Payment Fund	5,526,000						
Transfers to Special Funds	5,620,000	138,000	144,000	144,000	144,000	144,000	714,000
Transfers Expense	5,620,000	138,000	144,000	144,000	144,000	144,000	714,000
Hydraulic Capacity Enhancements Reserve		3,666,000					3,666,000
Expense Reserves - Non Construction		3,666,000					3,666,000
Total Expenditures	457,474,444	239,019,000	469,027,000	202,462,000	197,984,000	72,221,000	1,180,713,000
Ending Fund Balance	13,203,250	11,888,250	89,461,250	9,565,250	10,206,250	15,307,250	15,307,250*
TOTAL	470,677,694	250,907,250	558,488,250	212,027,250	208,190,250	87,528,250	1,196,020,250*

* The 2021-2022 through 2024-2025 Ending Balances are excluded from the Five-Year Total Use of Funds to avoid multiple counting of the same funds.

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Attachment A - Operating Budget Impact

	<u>2022-2023</u>	<u>2023-2024</u>	<u>2024-2025</u>	<u>2025-2026</u>
<u>Water Pollution Capital Program</u>				
New Headworks	\$11,000	\$26,000	\$27,000	\$28,000
Digested Sludge Dewatering Facility		\$8,167,000	\$12,599,000	\$12,958,000
Digester and Thickener Facilities Upgrade	<u>\$2,202,000</u>	<u>\$2,285,000</u>	<u>\$2,370,000</u>	<u>\$2,460,000</u>
Total Water Pollution Capital Program	\$2,213,000	\$10,478,000	\$14,996,000	\$15,446,000

Water Pollution Control
2022-2026 Proposed Capital Improvement Program

Additional Digester Upgrades

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2021
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2028
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	4th Qtr. 2027
Council Districts	4	Initial Project Budget	\$64,475,000
Appropriation	TEMP_126	FY Initiated	2021-2022

Description This project will rehabilitate up to six existing anaerobic digesters, including installation of new covers and mixers, upgrades the existing sludge distribution piping, and upgrades the digester heat supply system. The project may also include the installation of batch tanks to produce Class A biosolids (if required by future regulations).

Justification This project will complete the second phase of work for the Digester and Thickener Facilities Upgrade to ensure safe and reliable operation of the digestion facilities.

Notes This project corresponds to Plant Master Plan Project Nos. 50, 51, and 53, and Validation Project PS-02. Prior to 2018-2022, this project was part of "Digester and Thickener Facilities Upgrade".

Major Cost Changes

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND PROJECT 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			1,191	389				1,580		1,580
Design				4,816	1,279	291		6,386		6,386
Bid & Award				83	19	15		117		117
Construction				2,378		51,270	1,655	55,303	450	55,753
Post Construction				365				365	274	639
Total			1,191	8,031	1,298	51,576	1,655	63,751	724	64,475

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)			1,191	8,031	1,298	51,576	1,655	63,751	724	64,475
Total			1,191	8,031	1,298	51,576	1,655	63,751	724	64,475

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Advanced Facility Control and Meter Replacement

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Location Water Pollution Control Plant
Dept Owner Environmental Services
Council Districts 4
Appropriation A7224

Initial Start Date 3rd Qtr. 2010
Initial End Date 2nd Qtr. 2014
Revised Start Date
Revised End Date 1st Qtr. 2023
Project Budget \$11,000,000 **FY**
Initiated 2010-2011

Description This project develops and executes a Plant-wide automation master plan; replaces existing flow meters and actuators; and upgrades sensors, controls, and monitoring equipment throughout the Plant.

Justification The Plant currently has hundreds of meters measuring liquid, sludge, and gas streams. Many existing sensors, actuators, and flow meters are inaccurate or unreliable. Due to their age, it is more cost effective to replace them with modern equipment to ensure performance reliability and assure that needed components are available for ongoing maintenance. This project will allow the Plant to move towards improved data capture, resulting in greater operational reliability and flexibility.

Notes This project corresponds to Plant Master Plan No. 90 and Validation Project PA-01.

Major Cost Changes 2012-2016 CIP through 2017-2021 CIP - increase of \$16.9 million due to updated cost estimates, revised scope, addition of meter replacement scope, and project validation cost estimate.
 2018-2022 CIP - decrease of \$4.1 million due to reduction of scope.
 2019-2023 CIP - increase of \$17.9 million due to an increase in scope and updated construction cost estimate.
 2020-2024 CIP - decrease of \$7.4 million due to lower than expected construction bids for Phase I, resulting in a reduced expected cost estimate for Phase II.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,847	0							597	2,445
Design	1,751	61								1,812
Bid & Award	327	24							76	427
Construction	6,244	17,959	476	220				696	4,836	29,735
Post Construction	4	260		108				108	25	397
Total	10,173	18,304	476	328				804	5,534	34,815

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	10,173	18,304	476	328					804	
Total	10,173	18,304	476	328				804		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Aeration Tanks and Blower Rehabilitation

CSA	Environmental and Utility Services	Initial Start Date	1st Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	3rd Qtr. 2025
Location	Water Pollution Control Plant	Revised Start Date	2nd Qtr. 2015
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2029
Council Districts	4	Project Budget	\$114,880,000 FY
Appropriation	A7677	Initiated	2014-2015

Description This project rehabilitates the secondary and nitrification aeration tanks including structural, mechanical, electrical, and instrumentation upgrades. It also replaces the remaining existing coarse bubble diffusers with fine bubble diffusers; installs partition walls and reconfigures air piping to optimize process treatment capabilities; repairs concrete and applies coatings; installs Variable Frequency Drives (VFDs), new motors, new Motor Control Centers (MCC), and new controls to the electric driven blowers in Building 40 and Tertiary Blower Building; decommissions the engine driven blowers in the Secondary Blower Building; and replaces the S11 switchgear.

Justification The secondary and nitrification aeration tanks were constructed in phases between the 1960s and 1980s. Due to their age and the aggressive and corrosive environment they operate in, extensive rehabilitation is required. Conversion to fine bubble diffusers will increase the oxygen transfer efficiency and decrease energy requirements. Installing VFDs will minimize the impact of starting current on the blowers when the Plant is run on emergency power. Lastly, the S11 switchgear and MCCs are outdated and need to be upgraded to be compatible with the new VFDs.

Notes This project corresponds to Plant Master Plan Project Nos. 20, 24, and 85 and Validation Project PLS-01.

Major Cost Changes 2016-2020 CIP - increase of \$4.4 million due to escalation of construction costs.
 2018-2022 CIP - increase of \$4.5 million due to a revised scope and cost estimate.
 2019-2023 CIP - increase of \$26.5 million due to an updated construction cost estimate.
 2020-2024 CIP - decrease of \$16.9 million due to updated construction estimate and lower than expected construction bids.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	5,703	0	2,287					2,287		7,990
Design	4,329			7,462	707			8,169		12,498
Bid & Award	273			217		327		544		817
Construction	18,863	25,847	1,551	446		58,092	1,065	61,154	3,182	109,046
Post Construction				228				228	133	361
Total	29,169	25,847	3,838	8,353	707	58,419	1,065	72,382	3,315	130,713

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	29,169	25,847	3,838	8,353	707	58,419	1,065	72,382	3,315	130,713
Total	29,169	25,847	3,838	8,353	707	58,419	1,065	72,382	3,315	130,713

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program

Debt Service Repayment for Plant Capital Improvement Projects

CSA	Environmental and Utility Services	Initial Start Date	4th Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	4th Qtr. 2020
Location	N/A	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2033
Council Districts	N/A	Initial Project Budget	\$76,890,000
Appropriation	A402C	FY Initiated	2017-2018

Description This allocation provides for the repayment of financing proceeds, including short-term wastewater revenue notes and long-term bonds, drawn for the Plant Capital Improvement Projects.

Justification Repayment of previously received financing proceeds is a requirement of continued usage of financial instruments such as Wastewater Revenue Notes and Bond Proceeds.

Notes The use of Wastewater Revenue Notes for funding began in October 2017.

Major Cost Changes

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND PROJECT 5 YEARS	TOTAL
Expenditure Schedule (000s)										
General Administration	4,143	4,426	3,422	306,726	23,890	24,406	24,988	383,432	133,375	525,376
Total	4,143	4,426	3,422	306,726	23,890	24,406	24,988	383,432	133,375	525,376

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	4,143	4,426	3,422	306,726	23,890	24,406	24,988	383,432	133,375	525,376
Total	4,143	4,426	3,422	306,726	23,890	24,406	24,988	383,432	133,375	525,376

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program

Digested Sludge Dewatering Facility

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2013
Location	Water Pollution Control Plant	Revised Start Date	3rd Qtr. 2014
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2024
Council Districts	4	Initial Project Budget	\$1,000,000
Appropriation	A7452	FY Initiated	2012-2013

Description This project will construct a new mechanical dewatering facility and support systems to replace the existing sludge storage lagoons and open air solar drying beds. All new mechanical dewatering units, feed tank, storage, conveyance, and chemical dosing facilities will be housed in an odor-controlled building.

Justification This project responds to a recommendation in the adopted Plant Master Plan to consolidate the Plant's operational area by reducing the biosolids process footprint. It also provides greater flexibility in biosolids disposal options in anticipation of the potential Newby Island landfill closure in 2025, responds to stricter regulations for landfilling and alternative daily cover, and addresses odor, noise, and aesthetics concerns from the operations of the lagoons and sludge drying beds.

Notes This project corresponds to Plant Master Plan Project Nos. 44, 54, 57-60 and Validation Project PS-03.

Major Cost Changes 2014-2018 CIP - increase of \$325.0 million due to accelerated project start and compressed implementation schedule.
 2015-2019 CIP - decrease of \$256.8 million due to creation of separate biosolids projects through project validation.
 2016-2020 CIP - increase of \$1.6 million due to escalation of construction costs.
 2017-2021 CIP - increase of \$28.1 million due to increased scope and revised cost estimate.
 2019-2023 CIP - increase of \$18.3 million due to an updated construction cost estimate.
 2020-2024 CIP - increase of \$11.8 million due to an increase in scope and updated construction cost estimate.
 2021-2025 CIP - increase of \$26.4 million due to an updated scope and construction cost estimate.
 2022-2026 CIP - Increase of \$13.0 million due to an updated scope and construction cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	5,488	289								5,777
Design	3,824	11,321	447					447		15,592
Bid & Award	1,166	465								1,631
Construction	0	11,355	130,699	2,188	1,234			134,121		145,476
Post Construction					122			122		122
Total	10,478	23,430	131,146	2,188	1,356			134,690		168,598

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	10,478	23,430	131,146							
Total	10,478	23,430	131,146							

Annual Operating Budget Impact (000s)										
Operating					8,012	12,360	12,712			
Maintenance					155	239	246			
Total					8,167	12,599	12,958			

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Digester and Thickener Facilities Upgrade

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2006
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2008
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2022
Council Districts	4	Initial Project Budget	\$1,000,000
Appropriation	A4127	FY Initiated	2006-2007

Description This project rehabilitates four digesters and modifies the system to operate as a two-phase Temperature Phased Anaerobic Digestion (TPAD) system. The project also rehabilitates and modifies six dissolved air flotation units for sludge co-thickening, pressure saturation tanks, pipes, pumps, and ancillary equipment. A new odor control system, primary sludge screening facility, heat exchangers, biogas flare, and polymer dosing facility will be constructed. A new rack mounted digester gas conveyance system will also be constructed above grade to replace existing piping in the digester tunnels.

Justification The Plant has 16 anaerobic digesters constructed between 1956 and 1983, of which six are permanently out of service. This project is needed to ensure safe and reliable operation of the digester facilities including the gas conveyance system. The upgrade to TPAD provides the facility with the ability to increase biogas production and produce Class A biosolids (if required by future regulations).

Notes This project corresponds to Plant Master Plan Project Nos. 45 - 53 and Validation Project PS-01. Prior to 2015-2019, this project was titled "Digester Rehabilitation".

Major Cost Changes 2008-2012 CIP through 2019-2023 CIP - increase of \$168.3 million due to increased scope, realignment of project, higher than projected construction costs, inclusion of scope from other projects, and unforeseen conditions during construction, including air board regulatory requirements, major utility relocations, and a 78" SES line.
2020-2024 CIP - increase of \$31.5 million due to unforeseen conditions and increased construction management costs.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	707									707
Design	14,518	1,703								16,221
Bid & Award	115									115
Construction	151,933	30,728	13,622					13,622		196,283
Post Construction		435	411					411		846
Total	167,273	32,866	14,033					14,033		214,172

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	167,273	32,866	14,033					14,033		
Total	167,273	32,866	14,033					14,033		

	FY21 EST	FY22	FY23	FY24	FY25	FY26
Annual Operating Budget Impact (000s)						
Operating		1,865	1,934	2,005	2,080	
Maintenance		337	351	365	380	
Total		2,202	2,285	2,370	2,460	

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Facility Wide Water Systems Improvements

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2014
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	1st Qtr. 2022
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	4th Qtr. 2025
Council Districts	4	Project Budget	\$14,130,000
Appropriation	A7679	Initiated	2014-2015

Description This project rehabilitates, replaces, and/or extends the Plant's four water systems including piping, valves, pumps, controls, and other ancillary equipment. The scope of work will be based on hydraulic modeling and study of existing and future water demands at the Plant. The project may be constructed in phases based on the outcome of the study and priority of needs.

Justification The Plant's four water systems include potable water, groundwater, process/fire protection water, and recycled water. These were constructed over time with various Plant expansions and are in need of rehabilitation and upgrade due to age, condition, worker safety, plant reliability, and code compliance requirements. In addition, changes to water uses and demands have not all been addressed over time. An updated hydraulic model and assessment of current and future water demands will allow for the proper sizing of these systems to improve current and future performance and reduce risk of damage to pumping equipment.

Notes This project corresponds to Plant Master Plan Project No. 105 and Validation Project PF-06.

Major Cost Changes 2016-2020 CIP - Increase of \$1.6 million due to escalation of construction costs.
 2018-2022 CIP - Increase of \$2.1 million due to revised project delivery cost estimate.
 2022-2026 CIP - Increase of \$38.6 million due to revised scope and delivery cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,854	775								3,629
Design	7	2,660	2,829	118				2,947		5,614
Bid & Award	6	109	30	254				284		399
Construction		678		40,724	2,036	1,885	498	45,143		45,821
Post Construction				100			68	168		168
Total	2,868	4,222	2,859	41,196	2,036	1,885	566	48,542		55,631

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	2,868	4,222	2,859	41,196	2,036	1,885	566	48,542		55,631
Total	2,868	4,222	2,859	41,196	2,036	1,885	566	48,542		55,631

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Filter Rehabilitation

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2011
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2013
Location	Water Pollution Control Plant	Revised Start Date	3rd Qtr. 2014
Dept Owner	Environmental Services	Revised End Date	3rd Qtr. 2024
Council Districts	4	Initial Project Budget	\$3,506,000
Appropriation	A7227	FY Initiated	2010-2011

Description This project will replace filter media, valves, actuators, and electrical controls for all filters. It will also replace the existing surface wash system with a new air scour system, rehabilitate electrical switchgears and related motor control consoles, upgrade pipes, and make concrete repairs.

Justification The existing filter complex was constructed in the 1970s and requires significant refurbishment. The filter media, consisting of anthracite and sand, needs to be replaced and some of the mechanical and electrical components need to be upgraded. These critical improvements are needed to ensure continued regulatory compliance and operational reliability until a new filter complex is constructed.

Notes This project corresponds to Plant Master Plan Project Nos. 31, 32, and 33 as well as Validation Project PLF-01 and PLF-02.

Major Cost Changes 2014-2018 CIP - decrease of \$2.7 million due to the removal of scope that is dependent on the evaluation of the demonstration project.
 2015-2019 CIP - increase of \$26.9 million due to revised scope and project validation cost estimate.
 2016-2020 CIP - increase of \$6.5 million due to revised cost estimate and escalation of construction costs.
 2017-2021 CIP - increase of \$2.5 million due to increased project scope.
 2019-2023 CIP - increase of \$6.9 million due to a revised construction cost estimate.
 2020-2024 CIP - increase of \$2.5 million due to a revised construction cost estimate.
 2021-2025 CIP - increase of \$12.6 million due to a revised construction estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,047									2,047
Design	4,474	706								5,180
Bid & Award	316									316
Construction	228	48,300	1,506	1,549	1,507			4,562		53,090
Post Construction		100			299			299		399
Total	7,065	49,106	1,506	1,549	1,806			4,861		61,032

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	7,065	49,106	1,506	1,549	1,806			4,861		
Total	7,065	49,106	1,506	1,549	1,806			4,861		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Headworks Improvements

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2015
Location	Water Pollution Control Plant	Revised Start Date	1st Qtr. 2013
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2023
Council Districts	4	Initial Project Budget	\$5,975,000
Appropriation	A7448	FY Initiated	2012-2013

Description This project will modify Headworks No. 2 (HW2) to accommodate all dry weather flow. Improvements include re-routing some inlet and recycle flow piping, new storm water pump stations, and other mechanical enhancements to improve reliability and operation performance.

Justification HW1 was built in the mid-1950s and early 1960s and is the Plant's duty headworks. HW2 was built in 2008 and designed to operate in parallel with HW1 to handle peak hour wet weather flow. This project will improve the functional reliability of HW2.

Notes This project corresponds to Plant Master Plan Project Nos. 1, 2, and 7 and Validation Project PLH-01.

Major Cost Changes 2015-2019 CIP - increase of \$23.7 million due to incorporation of a portion of Headworks No. 2 Enhancement project.
 2016-2020 CIP - increase of \$863,000 due to revised cost estimate.
 2018-2022 CIP - decrease of \$9.0 million due to reduction of scope to eliminate a condition assessment of HW1.
 2020-2024 CIP - increase of \$1.3 million due to revised construction cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,445									1,445
Design	1,659	3								1,663
Bid & Award	520	40								560
Construction	2,913	15,357	186	181				367		18,637
Post Construction	22	75		15				15		112
Total	6,559	15,475	186	196				382		22,416

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	6,559	15,475	186	196				382		
Total	6,559	15,475	186	196				382		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

New Headworks

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2013
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2023
Council Districts	4	Initial Project Budget	\$79,400,000
Appropriation	A7449	FY Initiated	2012-2013

Description	This project will construct a new headworks to serve as the Plant's duty headworks. It also involves lining the emergency overflow basin and installing spraydown systems to facilitate cleaning. The project will also be tasked with odor control over select areas, such as junction boxes and grit collection. This project will need to be coordinated with the modifications made to the Headworks 2 hydraulics and the eventual decommissioning of Headworks 1.
Justification	Headworks No. 1 was built in the mid-1950s and further expanded in the 1960s. Due to its age and condition, extensive structural rehabilitation and mechanical rehabilitation would be needed to operate it as the Plant's long-term duty headworks. Based on previous studies, building a new duty headworks facility would be more cost effective and provide greater operational reliability and enhanced treatment, potentially piping and hydraulic simplification, addressing some of the operational issues currently experienced at the Plant, such as the deposition of grit in downstream processes.
Notes	This project corresponds to Plant Master Plan Project Nos. 1, 3, 4, 5, and 8 and Validation Project PLH-02.
Major Cost Changes	2015-2019 CIP - increase of \$11.8 million due to incorporation of a portion of Headworks No. 2 Enhancement project. 2016-2020 CIP - increase of \$4.8 million due to revised cost. 2018-2022 CIP - increase of \$27.0 million due to revised project cost estimate. 2020-2024 CIP - increase of \$19.4 million due to an updated construction cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	3,468									3,468
Design	8,641	30								8,671
Bid & Award	1,332	99								1,431
Construction	8,361	128,173	1,399	1,392				2,791		139,325
Post Construction		425		132				132		557
Total	21,801	128,728	1,399	1,524				2,923		153,451

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	21,801	128,728	1,399	1,524				2,923		
Total	21,801	128,728	1,399	1,524				2,923		

Annual Operating Budget Impact (000s)						
Operating			11	26	27	28
Total			11	26	27	28

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Nitrification Clarifier Rehabilitation

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2009
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2024
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2026
Council Districts	4	Initial Project Budget	\$26,701,000
Appropriation	A7074	FY Initiated	2009-2010

Description This project includes phased rehabilitation of the 16 nitrification clarifiers. Structural improvements may include concrete repairs and coating, new clarifier mechanisms and baffle installations, pipe support and meter vault replacements, and walkway improvements. Mechanical improvements may include piping, valve and actuator replacements, spray water system replacements, scum skimmer system upgrades, and return activated sludge piping lining. Electrical and instrumentation improvements may include motor control center replacements, new wiring, and other electrical equipment upgrades. Other incidental work may include grouting, painting, coating, and other surface treatments.

Justification The Plant's 16 nitrification clarifiers have been in service for 30 to 40 years depending on the year of construction. A condition assessment study, completed in 2011, recommended phased rehabilitation of the nitrification clarifiers. The improvements are needed to address structural, mechanical, electrical, and instrumentation deficiencies and will extend the useful life of the clarifier assets for an additional 30 years.

Notes This project corresponds to Plant Master Plan Project No. 21 and Validation Project PLS-02. This project is planned to be completed in multiple phases.

Major Cost Changes 2014-2018 CIP - increase of \$13.0 million due to revised estimate.
 2015-2019 CIP - Increase of \$22.0 million due to revised project validation cost estimate.
 2016-2020 CIP - Decrease of \$8.5 million due to revised scope and cost estimate.
 2017-2021 CIP - Decrease of \$1.6 million due to revised cost estimate.
 2020-2024 CIP - Increase of \$46.4 million due to an increase in the amount of rehabilitation required and updated construction cost estimate.
 2022-2026 CIP - Decrease of \$10.6 million due to revised scope and cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	3,832	0								3,832
Design	2,276	323	1,372	137				1,509		4,108
Bid & Award	228	94	50	280				330		652
Construction	3,397	50,137	1,316	22,221	1,183	1,217	600	26,537		80,071
Post Construction		250		297			190	487		737
Total	9,732	50,804	2,738	22,935	1,183	1,217	790	28,863		89,399

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	9,732	50,804	2,738	22,935	1,183	1,217	790	28,863		89,399
Total	9,732	50,804	2,738	22,935	1,183	1,217	790	28,863		89,399

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Outfall Channel and Instrumentation Improvements

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2014
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2019
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	1st Qtr. 2023
Council Districts	4	Initial Project Budget	\$8,120,000
Appropriation	A7678	FY Initiated	2014-2015

Description This project will repair erosion scour along the outfall channel weir structure, replace the weir board system, replace an electrical transformer, improve staff access around the sulfur dioxide building, install a new fiber optic system, and replace water quality instrumentation and flow meters.

Justification Discharging effluent has resulted in significant erosion of the outfall channel bed material adjacent to the weir structure, requiring replacement of the rock rip rap materials originally installed to protect the structure. In addition, several original materials, water quality instrumentation, and communications system used to ensure reliable outfall compliance have reached the end of their service life and need replacement.

Notes This project corresponds to Validation Project PLD-02.

Major Cost Changes 2016-2020 CIP - Increase of \$1.7 million due to escalation of construction costs.
 2018-2022 CIP - Decrease of \$776,000 due to reduction of project scope.
 2019-2023 CIP - Decrease of \$764,000 due to revised cost estimates.
 2022-2026 CIP - Increase of \$1.5 million due to revised scope and cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	867	38								905
Design	481	786								1,267
Bid & Award	2	131								133
Construction	11	1,028	6,094	464				6,558		7,597
Post Construction			20	128				148		148
Total	1,361	1,983	6,114	592				6,706		10,050

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,361	1,983	6,114	592				6,706		
Total	1,361	1,983	6,114	592				6,706		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Owner Controlled Insurance Program

CSA	Environmental and Utility Services	Initial Start Date	2nd Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2023
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2024
Council Districts	N/A	Initial Project Budget	\$16,085,000
Appropriation	A401B	FY Initiated	2017-2018

Description This allocation provides funding for a centrally managed insurance and risk control program for construction projects in the Water Pollution Control CIP.

Justification This allocation is required to centrally manage insurance and risk control programs for construction projects in this capital program.

Notes

Major Cost Changes 2019-2023 CIP - Increase of \$4.9 million due to revised insurance cost estimates.
 2022-2026 CIP - Decrease of \$2.3 million do to revised insurance cost estimates.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	7,466	4,839	3,705	1,399	1,264			6,368		18,673
Total	7,466	4,839	3,705	1,399	1,264			6,368		18,673

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	7,466	4,839	3,705	1,399	1,264			6,368		
Total	7,466	4,839	3,705	1,399	1,264			6,368		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Plant Electrical Reliability

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2003
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2014
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	1st Qtr. 2023
Council Districts	4	Initial Project Budget	\$7,671,000
Appropriation	A4341	FY Initiated	2003-2004

Description This project replaces substations and switches, modifies power distribution buses and cabling, and provides backup systems to enhance the overall safety and reliability of the Plant electrical systems. The project includes a multi-phase construction schedule based upon a study completed in 2004.

Justification The current power distribution network has grown in a patched manner over the years, and many electrical system components have reached the end of their service life. This project addresses immediate safety needs and provides for future reliability needs.

Notes This project replaces a formerly ongoing allocation titled "Electrical System Improvements".

Major Cost Changes 2005-2009 CIP - increase of \$33.5 million to fund construction/rehabilitation costs due to increased project scope.
 2007-2011 CIP - increase of \$15.6 million to fund construction/rehabilitation costs due to increased project scope.
 2008-2012 CIP - increase of \$26.5 million to fund construction/rehabilitation costs due to increased project scope.
 2009-2013 CIP - decrease of \$3.0 million to reflect a project scope change.
 2011-2015 CIP - increase of \$11.4 million due to increased project scope.
 2013-2017 CIP - decrease of \$64.7 million due to removal of the Gas Turbine/Internal Combustion Engine project scope, which is being refined and will be included as part of the Energy Generation Improvements project.
 2014-2018 CIP - decrease of \$1.4 million due to decreased project scope.
 2015-2019 CIP - increase of \$6.0 million due to revised project validation cost estimate.
 2017-2021 CIP - decrease of \$1.2 million due to revised project scope.
 2020-2024 CIP - increase of \$2.2 million due to revised construction cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	669									669
Design	1,939									1,939
Bid & Award	151									151
Construction	20,578	7,570	1,413	822				2,235		30,383
Post Construction	23	59		263				263		345
Total	23,361	7,629	1,413	1,085				2,498		33,488

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	23,361	7,629	1,413	1,085				2,498		
Total	23,361	7,629	1,413	1,085				2,498		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Plantwide Security Systems Upgrade

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2021
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2022
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	
Council Districts	4	Initial Project Budget	\$6,740,000
Appropriation	TEMP_693	FY Initiated	2021-2022

Description This project will upgrade three critical security components at the Plant: 1. Construct a new main guard shack with monitoring, lighting, traffic circulation, and pavement improvements; 2. Install closed-circuit television cameras throughout the Plant and upgrade software, hardware, and equipment in the main server room; and 3. Install access card readers throughout the Plant and install new proximity card badging stations.

Justification The existing guard shack is antiquated and undersized. Existing entrance and exit lanes are inadequate for larger delivery trucks, which impedes traffic flow and causes delays. Installing wired and wireless cameras, along with an upgraded server room and new monitoring station will enhance security throughout the Plant, which is needed due to increased operational and construction activity. Installing access card readers will provide will improve security by replacing a mix of entry systems (e.g., cyberkey, traditional locks, card readers) with a single system.

Notes

Major Cost Changes

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND PROJECT 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			115					115		115
Design			306					306		306
Bid & Award			57					57		57
Construction			6,218					6,218		6,218
Post Construction			44					44		44
Total			6,740					6,740		6,740

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)			6,740					6,740		6,740
Total			6,740					6,740		6,740

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Storm Drain System Improvements

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2021
Location	Water Pollution Control Plant	Revised Start Date	4th Qtr. 2017
Dept Owner	Environmental Services	Revised End Date	1st Qtr. 2024
Council Districts	4	Initial Project Budget	\$10,195,000
Appropriation	A404V	FY Initiated	2017-2018

Description This project upgrades the existing Plant stormwater drainage system to meet current City standards. The project includes modifying existing drainage facilities and constructing new storm system facilities to meet the City's 10-year design standard. This project may also include improvements to the existing combined sanitary sewer system.

Justification The Plant's stormwater drainage facilities do not meet the City's 10-year storm event standard. Upgrades to the existing systems are needed to prevent stormwater flooding in and around the Plant's operational area.

Notes

Major Cost Changes 2019-2023 CIP - Increase of \$3.7 million due to an escalation of construction costs.
 2020-2024 CIP - Increase of \$1.2 million due to revised condition assessment and construction management estimates.
 2022-2026 CIP - Decrease of \$1.7 million due to revised scope and cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,308	240								1,547
Design		979	77					77		1,056
Bid & Award			219					219		219
Construction			8,887	901	448			10,236		10,236
Post Construction					375			375		375
Total	1,308	1,219	9,183	901	823			10,907		13,433

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,308	1,219	9,183	901	823			10,907		
Total	1,308	1,219	9,183	901	823			10,907		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Support Building Improvements

CSA	Environmental and Utility Services	Initial Start Date	1st Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	3rd Qtr. 2023
Location	Water Pollution Control Plant	Revised Start Date	2nd Qtr. 2015
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2034
Council Districts	4	Initial Project Budget	\$55,590,000
Appropriation	A7681	FY Initiated	2014-2015

Description This project constructs various tenant improvements to the administration, operations, engineering, and other support buildings located throughout the Plant. It may include floor, ceiling, wall, partition, plumbing, heating, ventilation and air conditioning upgrades, fire protection, and security improvements, as well as ancillary landscaping improvements. It also constructs new warehousing facilities and an electronic warehouse management system which may include new computers, a central database, barcode scanners, mobile tablets, and other technology improvements. This project will be constructed in phases based on a detailed tenant improvement study, warehouse design study, and priority of needs.

Justification Most of the buildings at the Plant are between 30 and 50 years old and are in need of refurbishment to improve worker health, safety, and environment. The tenant improvements are also needed to bring the buildings into compliance with current building and safety codes. The new warehousing facility and warehouse management system will improve operational efficiency through better control of the movement and storage of materials, including shipping, receiving, material stocking, use, and distribution.

Notes This project corresponds to Plant Master Plan Project Nos. 94, 95, 96, 98, 106, and 107 and Validation Project PF-02.

Major Cost Changes 2016-2020 CIP - decrease of \$856,000 due to revised cost estimate.
 2018-2022 CIP - increase of \$2.2 million due to revised project delivery cost estimate.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	0									0
Project Feasibility Development	2,096	197					667	667	1,181	4,141
Design	993	3,308	148					148	4,193	8,643
Bid & Award	89	285	128					128	493	995
Construction		2,740	14,808	766	194			15,768	23,032	41,540
Post Construction Equipment, Materials and Supplies	346		160	107		150		417	1,141	1,558
Total	3,524	6,531	15,244	873	194	150	667	17,128	30,040	57,223

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	3,524	6,531	15,244	873	194	150	667	17,128	30,040	57,223
Total	3,524	6,531	15,244	873	194	150	667	17,128	30,040	57,223

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control
2022-2026 Proposed Capital Improvement Program
Detail of One-Time Projects

Yard Piping and Road Improvements

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2011
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	4th Qtr. 2026
Location	Water Pollution Control Plant	Revised Start Date	
Dept Owner	Environmental Services	Revised End Date	2nd Qtr. 2025
Council Districts	4	Initial Project Budget	N/A
Appropriation	A7396	FY Initiated	2011-2012

Description This project rehabilitates and/or replaces process piping systems, valves, and related appurtenances throughout the Plant. The work will be completed in phases based on the outcome of a detailed condition assessment, physical testing, and prioritization of needs. This project will also make roadway and drainage-related improvements throughout the Plant's main operations and residual management areas.

Justification The Plant has approximately 300,000 linear feet of piping along with associated valves and related appurtenances. The pipes range in diameter from 8 inches to 144 inches and carry gas, liquids, sludge, air, steam, and other process streams to and from the various treatment areas. The pipes vary in age, material, condition, reliability, and redundancy. Over 70 percent of the piping was installed more than 25 years ago and is in need of rehabilitation or replacement due to age, failure, and/or excessive maintenance. The Plant also has an extensive roadway network, nearly 40,000 linear feet of paved surfaces, that needs rehabilitation and/or replacement due to excessive wear, heavy vehicle traffic, and drainage issues.

Notes This project corresponds to Plant Master Plan Project Nos. 98 and 100 and Validation Project PF-04. Prior to 2018-2022, this project was ongoing in nature; it has since become a finite project.

Major Cost Changes 2019-2023 CIP - Decrease of \$14.3 million due to a decrease in project scope and a 78" SES pipe that will be replaced in the Digester and Thickener Facilities Upgrade project.
 2022-2026 CIP - Decrease of \$11.8 million due to a decrease in project scope and construction cost estimates.

	PRIOR YEARS	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	3,339	1,987	3,710	2,974	357			7,041		12,368
Design	987	1,203		3,437	3,404			6,841		9,031
Bid & Award	379	426		365	362			727		1,532
Construction	1,459	16,287	4,529	30,503	31,243	1,532		67,807		85,553
Post Construction	3	254	55	46	341	338		780		1,037
Total	6,167	20,157	8,294	37,325	35,707	1,870		83,196		109,520

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	6,167	20,157	8,294	37,325	35,707	1,870		83,196		
Total	6,167	20,157	8,294	37,325	35,707	1,870		83,196		

Annual Operating Budget Impact (000s)										
Total										

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Detail of Ongoing Projects

Hydraulic Capacity Engineering

CSA Outcome	Safe, Reliable, and Sufficient Water Supply; Reliable Utility Infrastructure	Council Districts	4
Department Owner	Environmental Services	Appropriation	A411B
Description	This allocation funds the expansion of the South Bay Water Recycling (SBWR) system through the construction of pipeline and ancillary distribution system projects. Use of these funds will be dedicated towards the design, engineering, and inspection for the connection of new developments to the recycled water utility system. SBWR's hydraulic capacity engineering is limited to extensions that are funded by grant funding, or funds from developers or other government agencies (e.g. Santa Clara Valley Water District). No revenue from Plant Tributary Agencies or City Sanitary Sewer rate payers will be used to fund this project.		

	FY21 Budget	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 Year Total
Expenditure Schedule (000s)								
Construction	25	25	125	25	25	25	25	225
Total	25	25	125	25	25	25	25	225
Funding Source Schedule (000s)								
South Bay Water Recycling Capital Fund (571)	25	25	125	25	25	25	25	225
Total	25	25	125	25	25	25	25	225

Plant Infrastructure Improvements

CSA Outcome	Reliable Utility Infrastructure	Council Districts	4
Department Owner	Environmental Services	Appropriation	A5690
Description	This allocation provides for improvements, rehabilitation, or replacement of existing Plant infrastructure. Examples of the ongoing replacement and rehabilitation work include handrail replacement, concrete repairs, telecommunication systems upgrade, and Plant support system improvements. 2021-2022 includes an increase of \$4.5 million, for a total allocation of \$5.5 million, for improvements to the RWF's construction-enabling area to provide sufficient infrastructure to support increased contractor activity at the Facility.		

	FY21 Budget	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 Year Total
Expenditure Schedule (000s)								
Construction	1,836	1,836	5,500	1,000	1,000	1,000	1,000	9,500
Total	1,836	1,836	5,500	1,000	1,000	1,000	1,000	9,500
Funding Source Schedule (000s)								
San José-Santa Clara Treatment Plant Capital Fund (512)	1,836	1,836	5,500	1,000	1,000	1,000	1,000	9,500
Total	1,836	1,836	5,500	1,000	1,000	1,000	1,000	9,500

Water Pollution Control
 2022-2026 Proposed Capital Improvement Program
Detail of Ongoing Projects

Preliminary Engineering - Water Pollution Control

CSA Outcome	Reliable Utility Infrastructure	Council Districts	4
Department Owner	Environmental Services	Appropriation	A7456

Description This allocation provides funding to support preliminary engineering for Plant-related projects, including studies, pilots, and field verifications to evaluate impacts on operations.

	FY21 Budget	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 Year Total
Expenditure Schedule (000s)								
Project Feasibility Development	2,534	2,534	2,000	1,000	1,000	1,000	1,000	6,000
Total	2,534	2,534	2,000	1,000	1,000	1,000	1,000	6,000

Funding Source Schedule (000s)								
San José-Santa Clara Treatment Plant Capital Fund (512)	2,534	2,534	2,000	1,000	1,000	1,000	1,000	6,000
Total	2,534	2,534	2,000	1,000	1,000	1,000	1,000	6,000

Program Management - Water Pollution Control

CSA Outcome	Reliable Utility Infrastructure	Council Districts	4
Department Owner	Environmental Services	Appropriation	A7481

Description This allocation funds the administration and management of the Water Pollution Control CIP.

	FY21 Budget	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 Year Total
Expenditure Schedule (000s)								
General Administration	15,307	15,307	11,386	10,275	10,014	9,661	3,392	44,728
Total	15,307	15,307	11,386	10,275	10,014	9,661	3,392	44,728

Funding Source Schedule (000s)								
San José-Santa Clara Treatment Plant Capital Fund (512)	15,307	15,307	11,386	10,275	10,014	9,661	3,392	44,728
Total	15,307	15,307	11,386	10,275	10,014	9,661	3,392	44,728

Water Pollution Control
 2022-2026 Proposed Capital Improvement Program
Detail of Ongoing Projects

Urgent and Unscheduled Treatment Plant Rehabilitation

CSA Outcome	Reliable Utility Infrastructure	Council Districts	4
Department Owner	Environmental Services	Appropriation	A7395

Description This ongoing allocation is used to investigate, prioritize, and rehabilitate structures and systems at the Water Pollution Control Plant. This funding will be used to respond to the Plant's urgent capital and rehabilitation needs that cannot be programmed during the annual CIP budget process.

	FY21 Budget	FY21 EST	FY22	FY23	FY24	FY25	FY26	5 Year Total
Expenditure Schedule (000s)								
Construction	1,500	1,500	1,500	1,500	1,500	1,500	1,500	7,500
Total	1,500	1,500	1,500	1,500	1,500	1,500	1,500	7,500

Funding Source Schedule (000s)								
San José-Santa Clara Treatment Plant Capital Fund (512)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	7,500
Total	1,500	1,500	1,500	1,500	1,500	1,500	1,500	7,500

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Summary of Projects that Start After 2021-2022

Project Name	Aeration Basin Future Modifications	Initial Start Date	3rd Qtr. 2019
5-Yr CIP Budget	\$ 4,680,000	Initial End Date	4th Qtr. 2030
Total Budget	\$ 50,277,000	Revised Start Date	3rd Qtr. 2024
Council Districts	4	Revised End Date	4th Qtr. 2035
Description	This project modifies the existing step-feed aeration basins to a Modified Ludzack-Ettinger (MLE) process, which would involve structural modifications to existing tanks and new mixers, pumps, fine bubble diffusers, and methanol feed systems.		

Project Name	East Primary Rehabilitation, Seismic Retrofit, and Odor Control	Initial Start Date	3rd Qtr. 2009
5-Yr CIP Budget	\$ 106,785,000	Initial End Date	4th Qtr. 2012
Total Budget	\$ 112,974,114	Revised Start Date	3rd Qtr. 2010
Council Districts	4	Revised End Date	2nd Qtr. 2031
Description	This project rehabilitates the existing primary clarifiers, including the coating of concrete and replacement of clarifier mechanisms with corrosion resistant materials. It also includes structural retrofits to allow new covers to be installed over a portion or all of the primary treatment area to contain odors. A new odor extraction and treatment system will also be constructed.		

Project Name	Final Effluent Pump Station & Stormwater Channel Improvements	Initial Start Date	3rd Qtr. 2019
5-Yr CIP Budget	\$ 43,003,000	Initial End Date	3rd Qtr. 2025
Total Budget	\$ 47,358,316	Revised Start Date	N/A
Council Districts	4	Revised End Date	2nd Qtr. 2027
Description	This project designs and constructs a new pump station to hydraulically push the Plant's final treated effluent to Coyote Creek. Additionally, it will improve the existing stormwater channel by rehabilitating the flapper gates and embankments.		

Project Name	Flood Protection	Initial Start Date	3rd Qtr. 2017
5-Yr CIP Budget	\$ 4,095,000	Initial End Date	2nd Qtr. 2021
Total Budget	\$ 5,867,013	Revised Start Date	N/A
Council Districts	4	Revised End Date	2nd Qtr. 2025
Description	This project provides 100-year flood protection for the Plant by constructing engineered earthen berms on the northern and eastern sides of the Plant.		

Project Name	New Disinfection Facilities	Initial Start Date	3rd Qtr. 2020
5-Yr CIP Budget	\$ 7,131,000	Initial End Date	2nd Qtr. 2029
Total Budget	\$ 56,977,000	Revised Start Date	3rd Qtr. 2024
Council Districts	4	Revised End Date	2nd Qtr. 2033
Description	This project constructs a new disinfection facility (currently assumed to be based on ultraviolet (UV) technology) to replace the existing sodium hypochlorite disinfection facility. It may also expand the existing chlorine contact basins to accommodate future peak hour wet weather flows and construct a new on-site hypochlorite generation facility. This project would only be triggered if new regulations concerning emerging contaminants are issued by the Regional Water Board within the next two to three NPDES permit cycles, and additional studies confirm future flow projections.		

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Summary of Projects that Start After 2021-2022

Project Name	Secondary Clarifier Rehabilitation	Initial Start Date	1st Qtr. 2017
5-Yr CIP Budget	\$ 25,777,000	Initial End Date	2nd Qtr. 2024
Total Budget	\$ 26,455,000	Revised Start Date	3rd Qtr. 2023
Council Districts	4	Revised End Date	4th Qtr. 2031
Description	The Plant has 26 secondary clarifiers configured with peripheral mix liquor feed channel, and either central or peripheral launders. The first phase of this project rehabilitates one secondary (BNR1) clarifier and retrofits it to receive a new baffle configuration based on computational fluid dynamic (CFD) modeling results. The new configuration is expected to improve clarifier performance and efficiency. The subsequent phases of the project will rehabilitate and convert the remaining 25 clarifiers based on the results of the first phase. Rehabilitation will include structural, mechanical, electrical, and instrumentation improvements.		

Project Name	Tunnel Rehabilitation	Initial Start Date	2nd Qtr. 2015
5-Yr CIP Budget	\$ 2,769,000	Initial End Date	4th Qtr. 2024
Total Budget	\$ 27,638,292	Revised Start Date	3rd Qtr. 2024
Council Districts	4	Revised End Date	2nd Qtr. 2028
Description	This project will rehabilitate and make safety improvements to the tunnel system throughout the Plant. The work may include structural, mechanical, electrical, ventilation, fire safety, and coating improvements and will be completed in phases based on a detailed condition assessment, physical testing, and prioritization of needs.		

Project Name	Various Infrastructure Decommissioning	Initial Start Date	3rd Qtr. 2018
5-Yr CIP Budget	\$ 21,751,000	Initial End Date	2nd Qtr. 2022
Total Budget	\$ 22,220,000	Revised Start Date	3rd Qtr. 2020
Council Districts	4	Revised End Date	2nd Qtr. 2025
Description	This project will decommission and remove equipment, structures, and piping located in Building 40, Pump and Engine Building, Sludge Control Building, digester campus, and tunnels.		

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Summary of Reserves

Project Name Hydraulic Capacity Enhancements Reserve

5-Yr CIP Budget \$ 3,666,000

Total Budget \$ 3,666,000

Council Districts 4

Description This reserve sets aside funding for future design, engineering, and inspection for the connection of new developments to the recycled water utility system. This reserve within the South Bay Water Recycling Capital Fund is fully funded by grant funding, or funds from developers or other government agencies (e.g. Santa Clara Valley Water District). No revenue from Plant Tributary Agencies or City Sanitary Sewer rate payers has been used for the allocation of this reserve.

Water Pollution Control

2022-2026 Proposed Capital Improvement Program

Explanation of Funds

Revenues and expenditures for the operation and maintenance of the San José-Santa Clara Water Pollution Control Plant (Plant) are accounted for by the City of San José, as the administering agency, through the San José-Santa Clara Treatment Plant Operating Fund (Operating Fund) and the San José-Santa Clara Treatment Plant Capital Fund (Capital Fund).

Revenues from tributary agencies of the San José-Santa Clara Water Pollution Control Plant are recorded directly into the Operating and Capital Funds. The tributary agencies include the City of Milpitas, City of Cupertino, Burbank Sanitary District, County Sanitation District No. 2-3, and West Valley Sanitation District.

Tributary agencies are assessed for their share of annual operation, maintenance, equipment, and facilities replacement and capital costs, based on their respective flow and strength of sewage conveyed to the Plant.

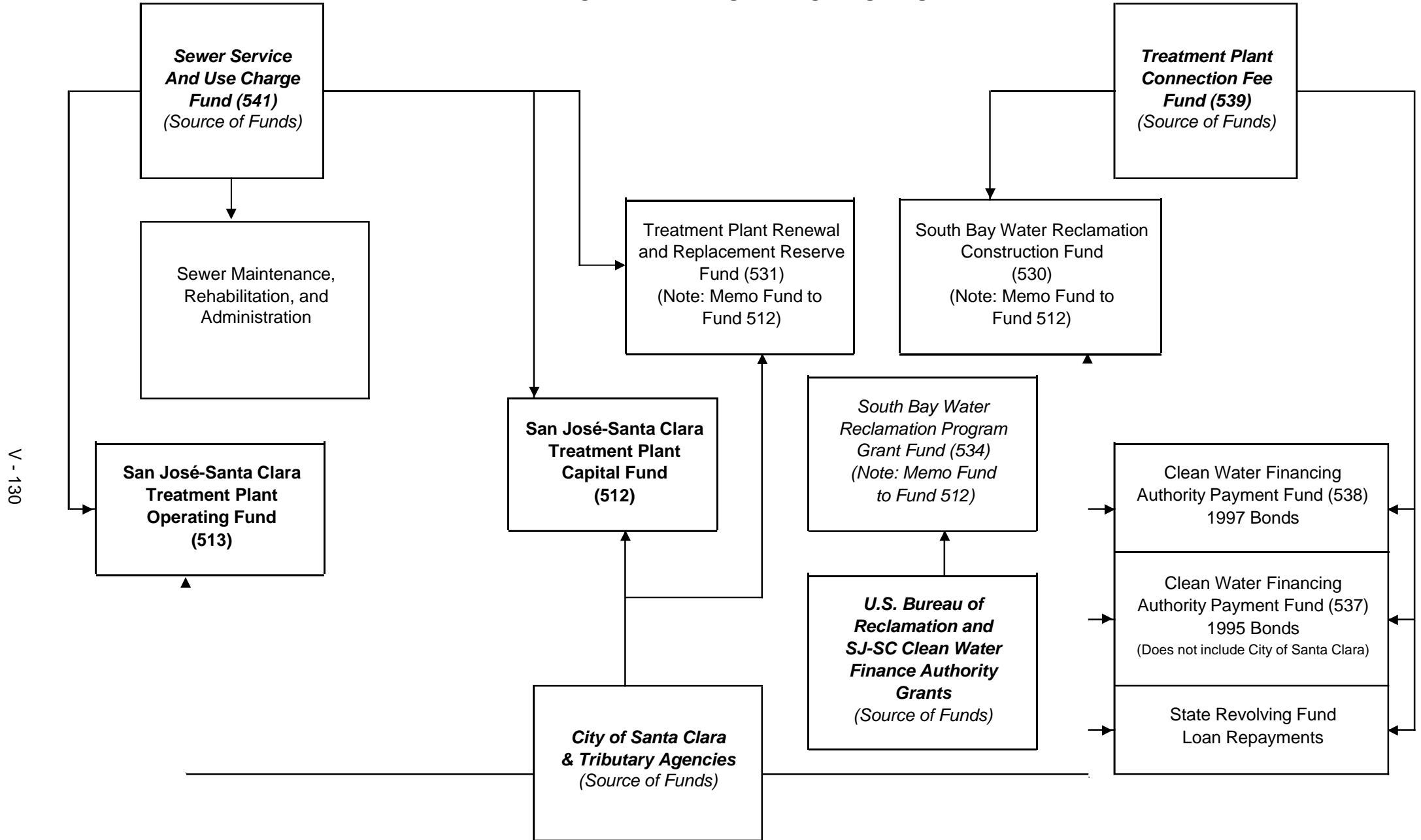
The San José Sewer Service and Use Charge Fund was established in the San José Municipal Code Section 15.12.640 in August 1959. This fund is the depository of revenues from Sewer Service and Use Charges received from residential, commercial, and industrial users of the sanitary sewer system. A portion of these monies is transferred to the Operating and Capital Funds to pay for the City of San José's share of operating and capital costs of the Plant.

The Santa Clara Sewer Revenue Fund was established by Resolution Number 916 of the City Council of Santa Clara in October 1960. A portion of these monies is transferred to the Operating and Capital Funds to pay for the City of Santa Clara's share of operating and capital costs of the Plant.

The Capital Fund provides all monies used for capital projects. Included in this fund is the Treatment Plant Renewal and Replacement Fund. This fund was established to satisfy the Plant's federal and State grant agreements as well as to comply with bond covenants.

The South Bay Water Recycling (SBWR) Capital Fund provides monies for capital improvement projects in support of SBWR system infrastructure. Additionally, the South Bay Water Recycling Operating Fund provides monies for the ongoing operation and maintenance of the South Bay Water Recycling system.

WATER POLLUTION CONTROL PLANT FLOW AND PRIORITY OF FUNDS



V - 130

The arrows indicate the flow of funds from each of the various sources to the fund in which the revenues are expended.

**ATTACHMENT A
2022-26 CIP AGENCY ALLOCATIONS**

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	5-Year Total	10-Year Total
Santa Clara												
WPCP Projects	37,742,205	25,650,904	27,864,765	27,984,744	7,521,899	3,343,301	5,914,849	15,275,284	1,523,164	4,208,927	126,764,517	157,030,042
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Total	37,742,205	25,650,904	27,864,765	27,984,744	7,521,899	3,343,301	5,914,849	15,275,284	1,523,164	4,208,927	126,764,517	157,030,042
West Valley												
WPCP Projects	13,620,449	10,381,312	11,583,707	10,458,297	2,929,546	1,384,468	2,468,319	6,173,866	642,912	1,769,444	48,973,310	61,412,319
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Total	13,620,449	10,381,312	11,583,707	10,458,297	2,929,546	1,384,468	2,468,319	6,173,866	642,912	1,769,444	48,973,310	61,412,319
Cupertino												
WPCP Projects	8,430,221	6,754,419	7,555,367	6,672,778	1,872,996	911,075	1,628,344	4,072,102	424,831	1,169,873	31,285,782	39,492,008
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Total	8,430,221	6,754,419	7,555,367	6,672,778	1,872,996	911,075	1,628,344	4,072,102	424,831	1,169,873	31,285,782	39,492,008
Milpitas												
WPCP Projects	14,167,123	11,785,375	13,223,230	11,240,371	3,260,422	1,593,425	2,854,782	7,024,916	748,699	2,057,063	53,676,522	67,955,407
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Total	14,167,123	11,785,375	13,223,230	11,240,371	3,260,422	1,593,425	2,854,782	7,024,916	748,699	2,057,063	53,676,522	67,955,407
CSD 2/3												
WPCP Projects	1,066,449	862,542	954,456	844,502	239,282	116,488	208,299	519,002	54,389	149,887	3,967,231	5,015,296
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,066,449	862,542	954,456	844,502	239,282	116,488	208,299	519,002	54,389	149,887	3,967,231	5,015,296
Burbank												
WPCP Projects	446,167	366,418	399,623	386,702	99,986	50,379	89,647	239,072	23,100	64,174	1,698,898	2,165,268
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Total	446,167	366,418	399,623	386,702	99,986	50,379	89,647	239,072	23,100	64,174	1,698,898	2,165,268
San Jose												
WPCP Projects	156,195,385	106,331,030	116,821,852	115,821,605	31,139,870	13,857,863	24,502,760	63,238,759	6,312,904	17,420,631	526,309,742	651,642,660
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
City Hall Debt Service	138,000	144,000	144,000	144,000	144,000	144,000	144,000	144,000	144,000	144,000	714,000	1,434,000
New Debt Service 2017-18	3,422,000	306,726,000	23,890,000	24,406,000	24,988,000	24,988,000	24,988,000	24,988,000	24,988,000	24,988,000	383,432,000	508,372,000
Total	159,755,385	413,201,030	140,855,852	140,371,605	56,271,870	38,989,863	49,634,760	88,370,759	31,444,904	42,552,631	910,455,742	1,161,448,660

2022-26 CIP AGENCY ALLOCATIONS

	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	5-Year Total	10-Year Total
TOTAL												
WPCP Projects	231,688,000	162,132,000	178,403,000	173,409,000	47,064,000	21,257,000	37,667,000	96,543,000	9,730,000	26,840,000	792,676,000	984,713,000
Equipment Replacement	0	0	0	0	0	0	0	0	0	0	0	0
City Hall Debt Service	138,000	144,000	144,000	144,000	144,000	144,000	144,000	144,000	144,000	144,000	714,000	1,434,000
New Debt Service 2017-18	3,422,000	306,726,000	23,890,000	24,406,000	24,988,000	24,988,000	24,988,000	24,988,000	24,988,000	24,988,000	383,432,000	508,372,000
	235,228,000	469,002,000	202,437,000	197,959,000	72,196,000	46,389,000	62,799,000	121,675,000	34,862,000	51,972,000	1,176,822,000	1,494,519,000